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Corynesporopsis obclavata and *Stanjehughesia jiangxiensis* spp. nov. from Lushan Mountain, China

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Abstract—Two new species, *Corynesporopsis obclavata* and *Stanjehughesia jiangxiensis*, are described and illustrated from decaying bamboo culms collected in Lushan Mountain, China. *Corynesporopsis obclavata* is characterized by its obclavate, smooth, 5–9-euseptate conidia. *Stanjehughesia jiangxiensis* is easily distinguished by its obclavate to obclavate-rostrate, smooth, 11–14-euseptate conidia.

Key words—anamorphic fungi, bambusicolous fungi, hyphomycetes, taxonomy

Introduction

Bamboos are known to host a number of highly characteristic fungi, of which over 1100 species have been described or recorded (Hyde et al. 2002). Nonetheless, our knowledge of bamboo fungi is incomplete and still at the cataloguing stage (Hyde et al. 2002). To enrich knowledge of bambusicolous fungi, we have been investigating saprobic microfungi occurring on decaying culms of bamboo. Collecting in the forest ecosystems of Lushan Mountain yielded two new hyphomycetes that clearly belong to the genera *Corynesporopsis* P.M. Kirk (Kirk 1981a) and *Stanjehughesia* Subram. (Subramanian 1992). The new species are described, illustrated, and compared with similar taxa. Specimens are conserved in the Herbarium of the Department of Plant Pathology, Jiangxi Agricultural University, Nanchang, China (HJAUP).

Corynesporopsis obclavata Jian Ma, **sp. nov.** Fig. 1

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Differs from *Corynesporopsis rionensis* by its much longer, obclavate conidia with more numerous eusepta.

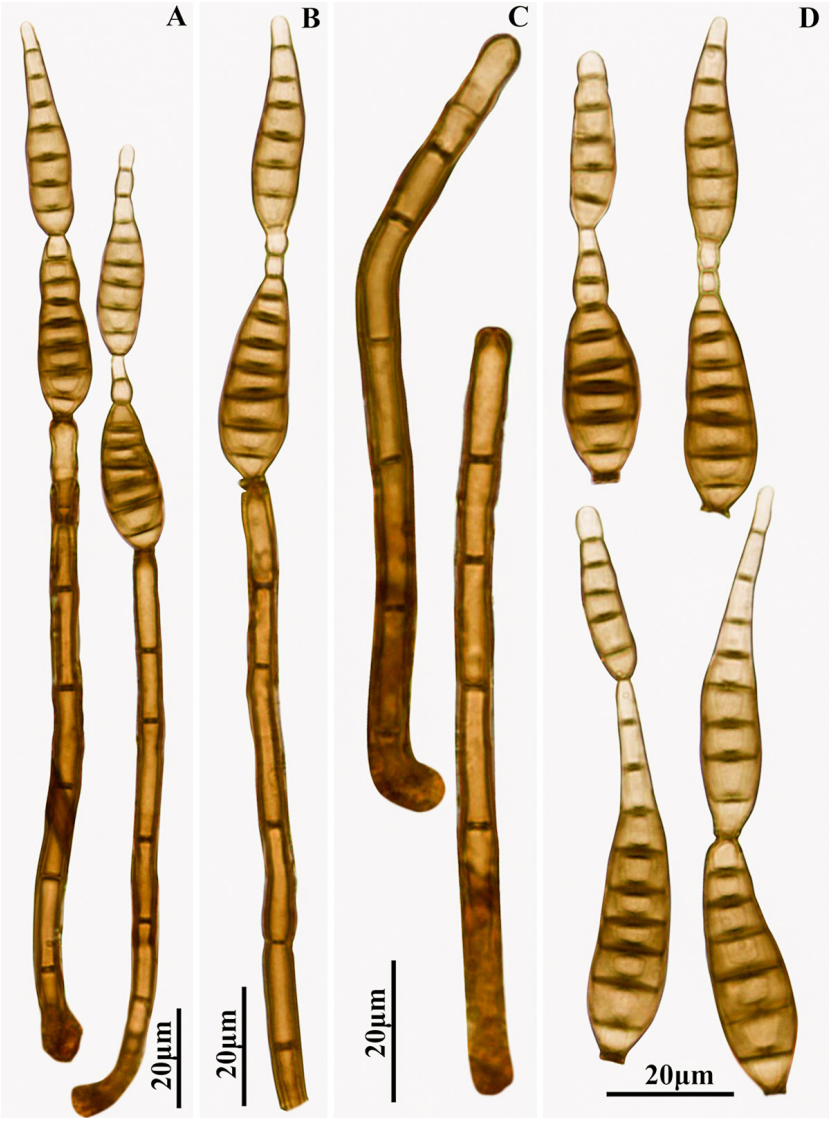

Fig. 1. *Corynesporopsis obclavata* (holotype, HJAUP M0204).
A, B. Conidiophores with catenate conidia; C. Conidiophores; D. Conidia.

Type: China, Jiangxi Province, Lushan Mountain, on decaying culms of bamboo, 8 November 2014, J. Ma (**Holotype**, HJAUP M0204).

Etymology: refers to the obclavate conidia.

Colonies on natural substrate effuse, dark brown to black, hairy. Mycelium partly superficial, partly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth hyphae. Conidiophores differentiated, single, erect, unbranched, straight or flexuous, brown to dark brown, smooth, septate, 100–135 × 5–7 μm. Conidiogenous cells monotretic, integrated, terminal, determinate, sometimes percurrent, cylindrical, brown, smooth, 17–22 × 5–6 μm. Conidial secession schizolytic. Conidia acrogenous, catenate, in chains of two, obclavate, brown, paler toward the apex, smooth, 5–9-euseptate, 27–61 μm long, 6–12 μm diam. in the broadest part, protruding a 2.5–4 μm diam. basal scar.

Comments—*Corynesporopsis,* established by Kirk (1981a) with *Corynespora quercicola* Borowska [≡ *Corynesporopsis quercicola* (Borowska) P.M. Kirk] as type species, is characterized by acrogenous, shortly catenate, euseptate conidia arising from terminal, integrated, monotretic, determinate or rarely percurrently extending conidiogenous cells on differentiated conidiophores. Fifteen species have been described or transferred to the genus based on differences in conidial morphology including shape, size, septation, ornamentation, and pigmentation (Kirk 1981a,b, 1983; Holubová-Jechová & Mercado Sierra 1986; Holubová-Jechová 1987; Morgan-Jones 1988; Sutton 1989; Castañeda-Ruíz & Kendrick 1990; Matsushima 1993; Castañeda-Ruíz et al. 2010; Ma et al. 2012; Xia et al. 2013, 2014; Hernández-Restrepo et al. 2014; Kirschner 2015). Castañeda-Ruíz et al. (2010) provided a key and illustrations to the ten species known at that time; Hernández-Restrepo et al. (2014) provided an expanded key that included two additional species; and Xia et al. (2014) provided a synoptic table of the main morphological features that distinguished 13 accepted species.

Corynesporopsis obclavata is similar only to *C. rionensis* Hol.-Jech., which is clearly differentiated by its fusiform to ellipsoidal, 24–36 × 8–11 μm, 3–4(–5)-euseptate conidia (Holubová-Jechová & Mercado Sierra 1986).

Stanjehughesia jiangxiensis Jian Ma, **sp. nov.** Fig. 2

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Differs from *Stanjehughesia fasciculata* by its wider, smooth conidia with eusepta but no distosepta; from *S. fusiformis* by its larger conidia with more numerous eusepta; and from *S. polypora* by its shorter conidia with fewer eusepta and without a germ pore in each cell.

Type: China, Jiangxi Province, Lushan Mountain, on decaying culms of bamboo, 8 November 2014, J. Ma (**Holotype**, HJAUP M0274).

Etymology: refers to the province where the type specimen was found.

Colonies on natural substrate effuse, brown. Mycelium superficial, composed of branched, septate, pale brown to brown, smooth-walled hyphae.

Fig. 2. *Stanjehughesia jiangxiensis* (holotype, HJAUP M0274). Conidiogenous cells and conidia.

Conidiophores reduced to conidiogenous cells. Conidiogenous cells monoblastic, determinate, solitary or grouped, cylindrical or ampulliform, brown to dark brown, smooth, 9.5–22 × 3.5–4 μm. Conidial secession schizolytic. Conidia holoblastic, solitary, acrogenous, straight or curved, obclavate to obclavate-rostrate, brown, smooth, 11–14-euseptate, 82–120 μm long, 10–12 μm diam. in the broadest part, tapering to 2.5–3 μm near the apex, 3.5–4 μm diam. at the truncate base.

Comments—Subramanian (1992) established *Stanjehughesia* to accommodate five *Sporidesmium* species, including *S. hormiscioides* Corda [≡ *Stanjehughesia hormiscioides* (Corda) Subram.] as type species. The genus is mainly

characterized by very reduced or absent conidiophores and solitary, euseptate conidia seceding schizolytically from monoblastic, determinate, lageniform or ampulliform, short conidiogenous cells (Subramanian 1992, Wu & Zhuang 2005, Seifert et al. 2011). Sixteen taxa have been included in *Stanjehughesia* (Subramanian 1992, McKenzie 1995, Mena-Portales et al. 2001, Wu & Zhuang 2005, Delgado 2008, Marincowitz et al. 2008, Ma et al. 2011, Almeida et al. 2014). However, only 14 species are currently accepted, of which seven have been recorded from China (Lu et al. 2000, Wu & Zhuang 2005, Ma et al. 2011).

Stanjehughesia jiangxiensis is similar to *S. fasciculata* J. Mena et al., *S. fusiformis* W.P. Wu, and *S. polypora* W.P. Wu in conidial shape. However, *S. fasciculata* differs by its narrower (7–11 µm) verruculose conidia with both eusepta and distosepta and with a broken outer wall at the apical region (Mena-Portales et al. 2001); *S. fusiformis* differs by its much smaller (65–85 × 7–8 µm) 6–8-euseptate conidia with a rostrate subhyaline apex and a wider (4–5 µm) base (Wu & Zhuang 2005); and *S. polypora* differs by its longer (110–165 µm) 15–20-euseptate conidia with a germ pore in each cell (Wu & Zhuang 2005).

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